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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,716	01/07/2000	YOICHIRO SAKO	450100-3601	4652

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NEW YORK, NY 10151

EXAMINER
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SEAL, JAMES

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 03/19/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/480,716

Applicant(s)

SAKO ET AL.

Examiner

James Seal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 101-194 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 101-194 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Action is in response to applicant's correspondence of 07 January 2000.
2. Drawing correction for figures 2, figure 7, figure 9, figure 11, and figure 13 have been approved.
3. Claims 1-100 have been cancelled.
4. Claims 101-194 are pending.

### ***Specification***

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title of this invention covers virtually every possible modification of an electronic signal without providing any insight as to what the applicant's invention is about.
6. Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11. In particular this is a continuation of an applicant 08/690224 which has become a patent US 6108423.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 101- are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton EP 0 267 039 A2, and further in view of Seth-Smith 4829569 A, Azuma US 4959863 A. and Ideno US 4953208 A.

9. As per claim 101, a method for reproducing digital data from a signal record medium is disclosed by Horton (see Horton Column 2, lines 46-54). Horton's teaches a means of copying special events over CATV for playback but does not permit further copying. Typically copy protection for video has in the past has been provided by scrambling the signal, but Horton is silent on how the copy protection in his system is implemented.

10. Seth-Smith implements a form of scrambling for CATV video signals using a key which is part of the control signal (Seth-Smith, Column 6, lines 41-48). One of ordinary skill in the art at the time the invention was made seeking to implement the invention of Horton would have been motivated to consider teachings in the copy protection art which were already in place. Seth-Smith use of control signals in order to recover a descrambling key would then provide a means for implementing the copy protection. Seth-Smith further provides strong motivation for his teaching in the same paragraph. Seth-Smith notes that this double encryption produces a system difficult to break.

11. Neither Horton and Seth-Smith provide any teaching as to how the scrambling of the video signal is accomplished. Again one of ordinary skill in the art at the time the invention was made would have been motivated to use existing means in the scrambling art. Ideno teaches scrambling video based on modifying the synchronizing signal and the color burst signal. Ideno's teaching (Column 1 and continuing through 2)

allow for the scrambling of the raster, intensity and color by generally eliminating the reference for these parameters. The color burst serves as a phase reference to which local color oscillator in the receiver is phase-locked to. If the color burst is modified the color fidelity and stability in displayed picture is lost. Thus one of ordinary skill in the art at the time the invention was made would have certainly considered all of these techniques; however, just simply eliminating the references doesn't provide a total solution. References can be reinserted and thus reversing the scrambling.

12. Azuma teaches that scrambling should be done by modifying the references and not doing away with them. By shifting the phase of various components relative to one another one has to not only means the hacker must find the correct references but continually change them in a way that must require trial and error. Thus one of ordinary skill at the time that the invention was made would have applied the phase shift techniques of Azuma, to the suggestions of Ideno, to obtain a video completely undecipherable to those without the proper keys. Claim 101 is rejected.

13. As per claims 102-110, the limitation of slicing and then shifting or inverting the color burst signal are directed to various embodiments taught by Azuma see Column 2, lines 3-27 and in particular lines 22-23. Claims 102-110 are rejected.

14. Claims 111-120 are apparatus claims corresponding to method claims 101-110 and are rejected in view of the same prior art of record.

15. As per claims 121-130, have the same limitations as method claims 101-110 with the additional limitation that the control information is read from an array and further that the ciphered signal is to be decrypted with key information from the control data. Seth-

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Smith teaches decrypting ciphered signal data using key information from control data see Seth-Smith Column 6, lines 41-50. That the control data is read from an array, is disclosed also by Seth-Smith see line 39 ( a packet header is a one dimensional array and two dimensional in terms of frames of data see figure 2). Claims 121-130 are rejected.

16. Claims 131-140, are means plus function implementation of claims 121-130 and are rejected in view of the same prior art of record.

17. Claim 141 has the same limitations as claim 131, with the added limitation that there is an arraying means for coding with a plurality of bits pre-set position in the analog signal using the control information as key information. Seth-Smith teaches arraying analog video data as bits in packets for example see figure 2- figure 4. using the control information as key data see Column 6 lines 39-48. Claim 141 is rejected.

18. As per claim 142, the limitation that the analog signal is an analog video signal with the pre-set position is a predetermined horizontal period within a vertical blanking period see Seth-Smith Column 3, lines 60-67. Claim 142 rejected.

19. Claims 143-152, recite the same limitations as claims 101-110 applied to the limitations of 141. One of ordinary skill in the art at the time that the invention was made would have been motivated to add these limitations as per claim 1 because they provide a very secure way of scrambling video information according to Azuma. Claims 143-152 are rejected.

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20. Claims 153-162 are directed to both receiving and reproducing digital data encompassing the apparatus disclosed in claims 111-119 and are rejected in view of the same prior art of record.

21. Claims 163-172 recite the limitations of claims 101-111 wherein there is a step of generating the transmission control information. This is disclosed in Seth-Smith Column 20, lines 7-10. Claims 163-172 are rejected.

22. Claims 173-182 are means plus functions for implementing claims 153-162 and are rejected in view of the same prior art of record.

23. Claim 183, recites the limitations of claims as claim 131, with the additional limitation that the signal is now a video signal, that there is an digital to analog converting means and finally that the recording medium is a digital disk. Horton discloses a video signal (TV) see Column 1, line 51. Horton discloses a VCR (Column 3, line 63), but one of ordinary skill would recognize, a DVD can hold a lot more data, and would be motivated to have included DVD disks to widen the sales market. To display the picture on an analog set an D/A would be necessary.

24. The limitations of claims 184-192 correspond to the limitations of claims 132-140 and claim 183 has narrowed the limitations of claim 131. Thus claims 184-192 are rejected in view of the same prior art of record.

### ***Conclusion***

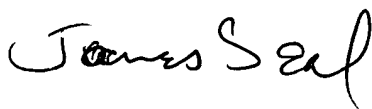
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Seal whose telephone number is 703 308 4562.

The examiner can normally be reached on M-F, 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 703 305 4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "James Seal". The signature is written in a cursive style with a large, stylized "S" at the end.

James Seal  
Examiner AU 2135  
12 March 2004